

The UNLV IGI Global Gaming Capital Initiative

Quarterly Progress Report

Reporting Period: October 1st to December 31st, 2016

January 31, 2017

Table of Contents

Section I: Proposal Progress	3
1. Major Accomplishment 1	3
2. Major Accomplishment 2	3
3. Major Accomplishment 3	4
4. Additional Accomplishments	4
5. Commercialization / Partnering	9
6. Intellectual Property	11
7. Programmatic & Project Changes	11
8. Looking Forward	11
Section II: Performance	13
Table 1: Progress Toward Metrics.....	13
Project Scorecard Narrative	14
Section IV: Monthly Logs of Activities for Reporting Quarter	15
Section V: Appendix	18
Appendix 1 – Sales/ Client Sheet.....	18
Appendix 2 – Scorecard Supporting Documentation.....	22

Project Purpose

The Global Gaming Capital Initiative (GGC) seeks to reinforce Nevada's position as the world's thought leader in gaming and hospitality, which remain the largest contributors to Nevada's overall economy and the largest contributors of jobs for Nevadans. The acceleration of globalization and the rise of new technologies can threaten the continued viability of Nevada's gaming-related economy, and as a result focused investment in research and innovation is necessary to maintain Nevada's competitive advantage.

In response, the UNLV International Gaming Institute (IGI) has proposed a strategy that will:

1. Provide two reports (one focusing on design and one focusing on industry, government, and academic strategy) that will research, define, and develop recommendations for "The Integrated Resort of 2050." Specifically, this project will develop initiatives that ensure that stakeholders are doing all that they can to ensure the long-term health of the gaming/hospitality sector in Nevada.
2. Build upon a successful existing model to create innovative and commercially viable games that attract the next generation of gamblers through the Center for Gaming Innovation (CGI).
3. Increase the efficiency, productivity, and profitability of non-gaming operations in integrated resorts through the collaboration of industry, entrepreneurs, and UNLV student inventors through the Hospitality Lab.
4. Examine the costs and speed to market challenges for gaming innovations by conducting research that explores these key issues, and then advocating for more consistent regulation across jurisdictions where appropriate.
5. Strengthen the economy of Nevada by developing initiatives that expand the leadership role of women in the gaming industry, thereby expanding the pool of talent available to lead this industry.

The Governor has stated his commitment to reinforce Nevada's status as the global intellectual capital for gaming and hospitality, and has called upon UNLV to lead the way. This Global Gaming Capital Initiative answers that call, with effective and appropriate academically-based strategies to achieve these objectives.

Section I: Proposal Progress

During the reporting quarter, the Global Gaming Capital Initiative has continued to progress toward meeting proposed metrics. Major accomplishments for the current reporting period include:

1. Major Accomplishment 1: Hosted Fourth Center for Gaming Innovation (CGI) Innovation Showcase

In December, CGI marked the successful conclusion of the fourth gaming innovation class. This year we had the most talented and diverse group of students yet, including students who travelled from out of state to participate in the program. The quality of the innovations presented by our students was high and offered more diverse and unique gaming options that will help satisfy the needs of a changing player landscape.

Our annual gaming innovation showcase was a tremendous hit. Our judges this year included executives from major casino operators and game distributors including Caesar's Entertainment, Station Casinos, and Action Gaming. The judges were so impressed with the games presented by the finalists this year that two of our finalists received very generous offers to further the development of their game. Action Games offered to donate time, resources, and expertise to build a fully functioning demo of one game. Meanwhile, this year's grand prize winner was a table game that immediately won the hearts of the industry judges. In fact, Caesar's Entertainment offered, on the spot, to host the field trial for the game as soon as it is developed. Both of these unexpected offers are extremely generous and historically unprecedented, reflecting the deep admiration and affection the industry now has for this program.

2. Major Accomplishment 2: IGI completes first Esports Lab class

Robert Rippee, Director of Hospitality Lab, led what we believe is the world's first-ever class on esports management and business modeling. The lab class was focused on development of hypothetical business models for integration of esports into the modern integrated resort – which is, of course, Nevada's most lucrative economic invention and export. The idea of the class was met with overwhelming support from the operators on the Las Vegas Strip. The final student projects were judged by a committee of senior executive experts in gaming and hotel operations from Caesars Entertainment, Wynn, Hakkasan Group, and a member of Nevada's Gaming Commission. Although the course was

focused on development of business models for integrated resorts, it appears that two projects will ultimately include intellectual property developments that can be patented and incorporated into our commercialization pipeline.

3. Major Accomplishment 3: Executive Development Program

The International Gaming Institute's Executive Development Program – the world's most prestigious gaming leadership academy – had its most successful event ever from November 10-19. This year, 62 attendees registered -- representing 10 countries and virtually every major gaming jurisdiction in the world.

It is the world-renowned faculty that make EDP a truly special gathering, and this year, there were 9 faculty who were current or former CEOs or Presidents. These faculty become members of the EDP family -- as do the attendees, who connect over their shared (and intensely difficult!) experience in Lake Tahoe.

Attendees are divided into teams of 8-9 attendees (all from different jurisdictions around the world, and each with different skill sets) to compete in the team competition -- this year, it was to respond to the Brazilian government's RFP for a new integrated casino resort like those that dot the Las Vegas skyline. These graduates now join alums who lead the industry on all six inhabited continents – forever bonded by their unique, shared university-based experience in the Nevada mountains.

4. Additional Accomplishments

- **UNLV Gaming Research & Review Journal**

Also this quarter, the IGI research team published its leading industry-facing research journal, *UNLV Gaming Research & Review Journal*, with six research and two review articles published. As evidenced by this list, our journal's publications reinforce our status as an international thought leader.

Peer Reviewed Research Articles

- "Conjoining the Concepts of Visitor Attitude and Place Image to Better Understand Casino Patrons' Behavioral Intentions," Suosheng Wang
- "Comparing Loyalty Program Tiering Strategies: An investigation from the gaming industry," Myongjee Yoo and Ashok K. Singh
- "How the Great Recession Affected Casino Staffing in Nevada Casinos," Toni Repetti

- “Identifying Opportunities To Inform And Inspire: Tribal Casino Employee Perceptions Of Tribal Self Sufficiency And Philanthropy,” Sandra Sun-Ah Ponting Dr, Jess Ponting, and Katherine Spilde
- “Customer Retention: Reducing Online Casino Player Churn Through the Application of Predictive Modeling,” Eunju Suh and Matt Alhaery
- “Forecasting Casino Gaming Traffic with a Data Mining Alternative to Croston’s Method,” Barry E. King

Review Articles

- “Play the cards, roll the dice – the integration of casinos within Asian tourism destination development strategy,” Glenn McCartney
 - “Budd Revisited - Gambling in Great Britain 15 Years On,” Daniel Waugh
- **International Center for Gaming Regulation continues to build its reputation as a global center of excellence**

The International Center for Gaming Regulation is now fully operational, establishing itself as an international center of excellence in the area of gaming regulation, which in turn serves the State as its companies expand into new markets. The focus of the Center in achieving this goal is to ensure that the world’s regulators have access to the best research and education available, thereby ensuring excellence in gaming regulation around the world.

The following developments emerged this quarter:

- The official appointments of the two Research Fellows (described in the previous report) were made during this quarter. Both research projects should be completed by the middle of 2017.
- The Center’s team is continuing its discussions with the British Columbia (Canada) Gaming Regulator on a progressive restructuring of their regulatory framework and practices.
- The Center has been invited by the Gaming Commission of Manitoba, Canada, on behalf of all the Canadian provinces, to submit a proposal setting out how the Center can assist Canadian regulators in developing common standards and procedures for license investigations with a view to minimizing duplication.
- The Center is currently in discussions with a group of progressive US State Regulators to facilitate a one-day summit aimed at aimed at promoting excellence in gaming regulation across the US. This educational, research, and advising initiative would help Nevada’s companies avoid some of the major challenges they have faced in business environments that have not been well regulated.

- The Center was asked to prepare and submit a report proposal to a group of Strip operators on the role that regulation played in eradicating crime within Nevada. This proposal was submitted and is under review, with hopes of informing conversations in both Brazil and Japan (the next big markets in gaming) as they make key decisions on proper regulation. In the long term, this is precisely the role that the Center hopes to play, as it serves as the global intellectual capital for governments that oversee gaming. Our attendee base reflects our now-global marketplace, with regulators from all over the world pouring into our programs already.
- This quarter, the Center also developed regulatory educational programs in Pre-Licensing, Financial & Background Investigations, and Gaming Audit, Compliance, and Enforcement.
- Our second three-day Pre-Licensing Financial & Background Investigations program for the year was offered at the International Gaming Institute in November. Regulators from several U.S. state jurisdictions, Canada, the U.K., Bermuda, and several Native American tribes attended.
- During October the Center offered a two-day program titled “Understanding Sports Betting,” which was attended by both regulators and industry. Sports betting, of course, has become a major growth and innovation area for the industry.
- Every Monday morning for four weeks in October, the Center’s Associate Director held a special mini-course titled Essentials of Gaming Law & Regulation for local industry professionals from gaming and hospitality companies, focusing on compliance and human resources functions.
- In late November, the Center offered a customized five-day training program for the Panamanian regulatory authority (Junta de Control De Juegos). This course was well received, and we expect to repeat this program in 2017.
- During the middle of December, the Center welcomed 25 international gaming regulators to a five-day training program on “Essentials of Land-based Casino Regulation”. Participants included senior executives and staff from Singapore, New Zealand, South Africa, Saipan, and Brazil - as well as domestic commercial and Native American jurisdictions.
- Negotiations for a similar customized program for the Michigan Gaming Authority in the area of gaming audit started in December, with an eye towards offering the course in late January 2017.
- Various discussions are ongoing with new jurisdictions in Alabama, Georgia, Louisiana, Brazil, and Japan, further indicating that the Center is fast becoming the go-to resource for the global industry.

- The Center has agreed a relationship with the North American Gaming Regulators Association (NAGRA) to provide all regulatory training for NAGRA's members at a discounted rate with a view for NAGRA to promote the Center's courses amongst its members. The Center will also be given the opportunity to arrange executive type training as part of NAGRA'S conferences.
- The Center is still in discussions with the training branch of the National Indian Gaming Association (NIGA) on possibly partnering on training programs. We hope to finalize these discussions during the coming NIGA conference in San Diego.
- The Center has successfully secured the opportunity to offer Regulatory Round Table discussions with regulators from around the world at a major European gaming event (ICE conference and exhibition in London). The topic of the discussion will be 'The Gaming Experience of the Future'.

In sum, this Center is proceeding exactly as planned – as a go-to thought leader in gaming regulation and policy, which of course is so crucial to the successful operations of many of Nevada's largest companies.

- **Australia**

This quarter, Dr. Bo Bernhard delivered the keynote address at the Clubs New South Wales Annual Conference in the Gold Coast (equivalent to the U.S. G2E event for Australia). This initiative built upon the work that was launched during Governor Sandoval's Trade Mission to Australia, which included the ground-breaking collaboration established with the University of Sydney. Also during this trip, the University of Sydney and UNLV researchers held two days of meetings on the science of sports wagering integrity.

- **IR 2050**

The IR 2050 project (which funds a research assistant focusing on "the integrated resort of the future") continues to flourish. This quarter, we worked with our renowned Hospitality Design program in the UNLV School of Architecture (SOA HD) to host its final showcase for industry. This semester, students in both programs (IGI and the SOA HD program) collaborated on two projects: 1) the ways in which hyperloop transportation can be incorporated into Las Vegas Strip integrated resorts, and 2) the ways in which globalization of gambling game choice and non-gambling amenity choices will affect Las Vegas Strip companies.

- **Gaming Innovation**

In November, CGI Associate Director Dan Sahl hosted fifteen representatives from The Registered Clubs Association of New South Wales, Australia, for a two-hour discussion on the changing landscape of casino gaming, how it might affect the Australian gaming market, and how the industry can adapt.

Also in November, Associate Director Dan Sahl was invited to moderate a panel at the Table Games Conference discussing innovation in table games. In addition to Dr. Sahl, two successful students from the gaming innovation program at UNLV spoke at the panel about their own journey and successes.

Global Gaming Capital key speaking/advising opportunities this quarter included:

- **Hospitality & Esports Innovation**

Robert Rippee, director of Hospitality Lab, was invited to speak:

- October – Panel Discussion on Robotics and millennials, The Lodging Conference, Phoenix, AZ
- November – Innovation at Executive Development Program
- November – Esports and Innovation at Naruscope at SLS Hotel & Casino
- December – Innovation in Hotels and Casinos at xLive, Tropicana Hotel & Casino
- December – Interview on NPR regarding charging for parking on the Las Vegas Strip
- December – Interview on local Channel 3 on Wynn’s decision to include Amazon Echo in all hotel rooms

- **Esports & Casino Resorts Conference**

IGI Research Director Brett Abarbanel spoke in the closing session at the Esports and Casino Resorts Conference at the SLS on October 26, with Bryce Blum, General Counsel at Unikrn.

- **Totally Gaming Summit on Latin America in Miami**

In October, André Wilsenach participated in a three-day Summit organized by Totally Gaming, where he spoke on the regulation of gaming.

- **European iGaming Congress in Berlin**

In October, André Wilsenach participated in a panel discussion at the EiG Congress on the topic of relationship between regulators and industry.

- **IMGL Conference, Dublin**

In October, André Wilsenach participated in a panel discussion at the International Masters of Gaming Law conference on the importance of compliance in the online gaming world. During this conference, the Executive Director held discussions with the IMGL leadership about a putting on a joint conference in the area of gaming law and regulation in Las Vegas.

- **International Association of Gaming Regulators (IAGR) Conference, Sydney**

In November, Andre Wilsenach participated as moderator and panelist in several debates about the regulation of both terrestrial and online gaming. Andre also met with the IAGR Board of Trustees to promote the objectives of the Center.

- **Macau Gaming Summit**

In October, Jennifer Roberts participated on a panel at the Macau Gaming Summit on junket operations in the United States.

- **Macau Polytechnic Institute**

In October, Jennifer Roberts lectured to students in the gaming program at the Macau Polytechnic Institute on current issues in the U.S. gaming industry.

- **Nevada State Bar, Gaming Law Conference in Las Vegas, Nevada**

In November, Jennifer Roberts directed a panel at the Nevada State Bar's annual Gaming Law Conference. The topic was Ethics in Cyberspace and outlined issues related to cybersecurity.

- Jennifer Roberts continued instruction of the fall semester courses at UNLV William S. Boyd School of Law and the S.J. Quinney College of Law at University of Utah.

Finally, we would note that each of these developments is linked to both the innovation objectives and the broader objective of maintaining our state (and our university's) status as the global intellectual capital.

5. Commercialization / Partnering

Hospitality Lab: Two projects continue into sales pipeline for commercialization

An innovative new idea called "Window Magic" is moving forward to prototype development. Pending successful completion, two candidate hospitality companies (Wynn and Genting) have expressed serious interest in the IP. Meanwhile, a second project team with a product called "Trendy" seeks a move into an incubator program to develop their prototype software app.

Gaming Innovation: New licensing opportunities being explored

In this quarter, a number of promising opportunities were presented to our student inventors. We have engaged in preliminary conversations with several game

developers regarding our student’s IP including Casino Game Maker, a developer of next-gen slots; Alea.com, an online casino in the European Market; and Ainsworth gaming. These companies have demonstrated genuine interest in several products and we are in the early stages of exploring licensing arrangements.

Table 1: Industry Support for IGI received this quarter

The industry is investing in IGI in unprecedented ways, alongside GOED. This section summarizes this leveraged support.

Center / project	Amount received	For
IGI	\$100,000	Caesars Entertainment donated \$100,000 to fund community outreach projects to extend the IGI’s strongest programs into local educational institutions.
CGI	\$5,000	Donation from the Kish Foundation for student innovation prizes.

Overall, IGI has leveraged GOED support into much larger financial investments in our successful programs in support of the Global Gaming Capital initiative. In 2015/16 alone, IGI was awarded more than \$2.5 million dollars in additional funding support for its programs beyond the support received from GOED (outlined in the table below):

Table 2: External support for IGI during 2015/2016

Center / project	Amount pledged/received	From
International Center for Gaming Regulation	\$1 million	Wynn Resorts Association of Gaming Equipment Manufacturers (AGEM) Gaming Laboratories International (GLI)
International Center for Gaming Regulation	\$1 million	Nevada State Legislature (for this biennium)
IGI	\$200,000	State of Nevada Department of Health and Human Services - Nevada Problem Gambling Project
IGI	\$400,000	Grants on business research and teaching topics

6. Intellectual Property

Gaming Innovation:

CGI filed two new patent applications for game innovations developed in the fall 2016 class.

Hospitality Lab:

We are expecting to pursue at least one and possibly two patent applications from the fall semester esports lab class.

7. Programmatic & Project Changes

A minor shift is taking place with Jan Jones Blackhurst, who will be joining our team to focus on women and leadership, via our first IGI Chief Executive in Residence. We anticipate this happening in the next few months, and this development further reflects the industry-academic “bridge work” for which IGI is known.

8. Looking Forward

Window Magic (developed through the Hospitality Lab class in spring 2016) will move to the prototype stage with strong implications for commercialization from Wynn, should the prototype work as expected. Intellectual property from the esports lab will be further developed and pushed forward in Q1 2017.

In the upcoming quarter, the Center for Gaming Innovation will focus on filing several patents for the new games and products developed during the fall 2016 class. We expect to file patents for new games. Additionally and as always, we will continue to work on game development. In the current climate, most of our student’s IP requires a working demo to prove the viability of the product and assist in commercialization. To that end, CGI has reached out to talented students including engineering, art, computer science, and mathematics at UNLV looking for opportunities to get hands on experience in gaming. In the fall semester of 2016, CGI partnered with UNLV’s College of Engineering to get students working to build some of the physical apparatuses designed in the innovation class. We expect the first prototypes to be completed in April and we will be continuing to present new designs for development.

The next quarter will also present numerous opportunities to continue to expand the global footprint of the International Center for Gaming Regulation. In the area of training, the Center is discussions with a German-based agency about offering a high level leadership development program for German regulators, focused on introducing online gambling. Similarly, the Center is in discussions with the Gaming Regulators African Forum (GRAF) about offering a similar regulatory leadership program for regulators in Southern Africa

The “speed to market” study will also continue to move forward with academic rigor and objectivity, overseen by Melissa Rorie, Ph.D., Assistant Professor in the Department of Criminal Justice within the UNLV Greenspun College of Public Affairs. Professor Rorie has been working in close collaboration with the Center’s executive to develop a questionnaire and series of follow-up interview questions for distribution to and coordination with the four large manufacturers of gaming equipment; the drawing of a sample that meets academic standards; registering the project with UNLV’s Institutional Research Board; finalizing non-disclosure agreements between UNLV and the manufacturers; and engaging in pre-testing of the initial research instruments. The plan is to have by January 1 the pre-testing completed, the sampling of jurisdictions finalized, and the questionnaire distributed to the manufacturers providing data.

Section II: Performance

Table 3: Progress Toward Metrics

UNLV International Gaming Institute / Global Gaming Capital Initiative (GGC) Progress Dashboard

GOED Requested Metrics	Current Result / Year-end Target		
	To 6/30/15	By 6/30/16	By 6/30/17
	Number of Companies that moved to Nevada as a result of IGI KF project	0/0	0/0
Number of start-ups	0/0	0/0	0/1
Number of jobs created	0/0	0/0	0/10
Intellectual property licenses / options	0/0 ^A 5/0 ^B	0/0 ^A 1/4 ^B	0/0 ^A 1/6 ^B
Intellectual Property Revenue Received by University	\$25,500/ 0	\$5,000/ \$20,000	\$5,000/ \$30,000
Number of research grants awarded to (and received) the IGI research teams and faculty ^C	0/0	2/0	1/0
Amount of research funding received by IGI research team from industry or public sector agencies	0/0	\$258,342 /0	\$139,372 /0
Number of sponsored research contracts executed on behalf of IGI research team	0/0	2/0	1/0
Number of patent applications filed	23/0	14/10	3/10
Number of issued patents	0/0	0/0	1/0
Number of students placed with companies	0/0	1/2	0/2
Number of faculty hired	1/0	1/1	0/0
Amount/value of gifts/donation received by UNLV in support of IGI	\$5,000/ 0	\$330,000 /\$20,000	\$165,750/ \$20,000
Total number of student internships	1/0	3/4	4/4

A. Number of IP licenses
 B. Number of options
 C. Excludes sponsored research and KF funding
 For the period up to 6/30/15 actual performance only has been reported for the revised metrics (targets were based on previous metrics)

Color Key	n/a or target of zero	Too early to tell	Goal not met	Close to achieving goal	Goal achieved
------------------	-----------------------	-------------------	--------------	-------------------------	---------------

Project Scorecard Narrative

Intellectual Property Options

Please note the reduction in the number of IP options from 2 to 1 since the last quarterly report. This is due to changes to one IP sale which mean this deal is now pending and not finalized. This amend reflects the current status of this deal.

Intellectual Property Revenue Received by the University

\$5,000 in royalty revenue stems from the sale of Big Bet intellectual property to Genesis Gaming.

Number of research grants awarded to (and received) by IGI research teams and faculty:

One grant: from the State of Nevada Department of Health and Human Services for the Nevada Problem Gambling Project.

Amount of research funding received by IGI research team from industry or public sector agencies:

Table 4: Breakdown of research funding received

Center / project	Amount received	For
IGI	\$139,372	State of Nevada Department of Health and Human Services - Nevada Problem Gambling Project

Number of sponsored research projects executed on behalf of IGI research team:

One (see above).

Number of patent applications filed:

2 additional patents filed this quarter.

Table 5: Patent Filings this quarter

Primary Inventor	Application No.	Application Date	Type	Commercialization Status
Gabriel Gomes	62/430083	12/05/16	Provisional	Early Negotiations
Matthew Henry Stream	62/438442	12/22/16	Provisional	Early Negotiations

Number of patents issued:

In December, the US Patent office issued a notice of allowance for one of our student inventions: an enhanced Big 6 wheel that offers more high-volatility wagering options. We are proud to announce that this is our first issued patent. We anticipate that several more patents will be issued in the coming months as we begin to hear back on earlier applications.

Amount/value of gifts/donation received by UNLV in support of IGI:

Table 6: Breakdown of gifts/donations received this quarter

Center / project	Amount received	For
IGI	\$100,000	Caesars Entertainment donation to fund diversity/community initiatives over the next two years.
CGI	\$5,000	Donation from the Kish Foundation for student innovation prizes.

Total number of student internships:

Four Knowledge Fund graduate students hired:

- Aron Kock
- Marta Soligo
- John Lukasik
- Shekinah Hoffman

Section III: Budget

Please see the quarterly report to the GOED Business Office.

Section IV: Monthly Logs of Global Gaming Capital Initiative Activities for Reporting Quarter

October:

IGI: Bo Bernhard keynote address at the Clubs NSW Annual Conference (see above).

Gaming Innovation: Continued working with Gaming Innovation Class students on project development.

Esports lab: first ever esports lab class continues.

Hospitality Lab: commercialization progress continues as described in section 5.

Regulatory Center: Executive Director Andre Wilsenach attends and speaks at various key industry conferences in Berlin, Dublin, and Miami. Associate Director Jennifer Roberts speaks at the Macau Gaming Summit.

November:

IGI: Executive Development Program at Lake Tahoe (see above): more than 60 attendees from across the globe completed this prestigious program.

Esports Lab: Esports class continues, ideas are developed in student project teams in preparation for the end of semester pitch night.

Regulatory Center: Executive Director Andre Wilsenach represents the center at the IAGR (International Association of Gaming Regulators) conference in Sydney.

Gaming Innovation: Continued working with Gaming Innovation Class students. Dr. Sahl participated in panel, along with Gaming Innovation students, on table game innovation at Table Games conference. Dr. Sahl hosted industry representatives from Australia for a discussion on future trends in casino game design.

December:

IGI: Funding pledged and received from Caesars Entertainment to establish CORE Academy program (community initiative). Development of strategy and budget for this project commences, as it seeks to bring the IGI's programs to the community (see above).

Esports Lab: the new esports lab class concludes with a student "pitch night" to industry executives.

Regulatory Center: André Wilsenach contributed the introductory chapter to the 3rd Edition of the book 'Gaming Law – European Lawyer Reference'. Jennifer Roberts authored an article on key decisions made by Nevada courts of law that affect gaming in Nevada Gaming Lawyer magazine. Regulatory Round Table at G2E.

Gaming Innovation: The Gaming Innovation Class concluded with an Innovation Showcase event. Filed two new patents.

Section V: Appendix

Appendix 1 - Sales Pipeline

	Company Name	Company Type	Opportunity Type	Notes (Progression and Next Step)
Leads - Awareness				
	GameCo	Casino Game Manufacturer	Product Sale/Licensing	Discussion about possible opportunities with esports business models
	GameCo	Casino Game Manufacturer	Product Sale/Licensing	Discussion about possible gaming opportunities with esports products developed in lab
	Caesars Entertainment	Hotels and Gaming	Product Sale/Licensing	Discussion about possible opportunities with esports pod concept developed in lab
Prospects - Interest				
	Resorts World Las Vegas/Genting	Hotels and Gaming	Product Sale/Licensing	Discussion about use of OLED screens in high end suites
	Wynn Entertainment	Hotels and Gaming	Product Sale/Licensing	Discussion about building/testing prototype of OLED screens in high end suites
	Ainsworth	Game Distributor	Product Sale/Licensing	Student in discussion about licensing slot patent.
	Caesars Entertainment	Hotels and Gaming	Collaboration	Discussion about CSR for esports
	GameCo	Game Distributor	Collaboration /Acquisition	Discussion about developing student games
	Casino Game Maker	Game Distributor	Product Sale/Licensing	Interest in fantasy-sports gaming.
	Caesars Entertainment	Hotels and Gaming	Collaboration	Discussion about next-gen gambling games
	IGT	Game Distributor	Product Sale/Licensing	Interest in two student games
	Konami	Game Distributor	Product Sale/Licensing	Discussion about next-gen game design/opportunities.
	Scientific Games	Game Distributor	Product Sale/Licensing	Interest in distributing one student innovation
	Station Casinos	Hotels and Gaming	Product Licensing/ Development	Discussions about developing promotional apps.

Global Gaming Capital Initiative at UNLV

Qualified - Desire				
	Private Investor	N/A	Seed Round Investment in student startup (Guru Games)	Discussion with Guru Games about seed round investment
	Alea.com	Online Gaming	Distribution	Interest in distributing student-developed games
	Las Vegas Sands Corp.	Hotels and Gaming	Distribution	Interest in video gambling product.
Negotiation - Action				
	Caesars Entertainment	Hotels and Gaming	Product Licensing	Offering to allow table-game field trial at Las Vegas property
	FuelYouth	App Developer	Product Sale/Licensing	Negotiating to develop social/gambling app
	GPI	Game Apparatus Distributor	Product Licensing	Currently in discussion about licensing student patent for enhanced card shoe security.
Won or Lost				
	Big Bet Gaming	Product Sale	Student Game: Show Pai	
	Genesis Gaming Systems	Product Licensing	Student Apparatus: Slide to Decide	

Game sales in the gaming industry

Each game sold by the Center for Gaming Innovation usually includes upfront money, which can vary greatly in amount from a few thousand dollars to six figure sums. All of the sales include royalties to the inventors for each machine or table installed and generating revenue for the distributor. For example, upfront money provided to student inventors for a sale may be modest (less than \$5,000) and then, in addition, the inventors receive a 20% royalty for the gross income for each table installed (which is fairly standard when distributing table games).

All student IP developed and sold through CGI has been outright sold (sometimes the inventor retains certain rights to the patent, or the sale covers brick and mortar applications but not internet options). Big Bet Gaming LLC* has been a particularly fruitful venue for CGI's table games because they have committed (and made good on their commitment) to get every game approved for use in Nevada and to place those games in casinos.

The time to develop, patent, commercialize, and offer a game on a casino floor can be less than a year in the case of table games. A slot patent takes longer due to the increased cost and time investment needed to develop and test the game.

A successful gambling game can only generate revenue if it is popular, both with casinos and players, a process that can take years. The good news is that the number of patents being generated by CGI increases the likelihood that one or two popular games will emerge to generate a strong revenue stream for the program, to provide revenues to the game manufacturers, and to increase gaming revenue in Nevada and beyond.

For most CGI products, the sales process is surprisingly quick once the initial demonstration of the product is made. If a game generates interest, the sale may be finalized in a matter of a few months.

Additional Notes on CGI Metrics

Because of the long development cycles of gaming products, primarily due to the regulatory approval process, new games and equipment typically take one to two years from project completion to approval for use in casinos. At this point, with the financial help of Big Bet Gaming, LLC*, six program-developed games, namely: 40X Blackjack™, Casino Battle™, Flip Card™, Pai Wow Poker™, Show Pai™ and Super Three Card™ have all received approval for use in Nevada and have made their Nevada debuts. As far as the future financial success of these games, and the future revenue due to UNLV as a result, this is unpredictable. Typically, it takes up to five years for a new casino table game to gain market acceptance.

As far as the current disposition and associated technology transfer of projects created in the program, one project, Domino Dragon™, which is a new method of scoring slot machines has been acquired by Konami Gaming and is in development. The six approved table games listed above were acquired by Big Bet Gaming and modest advances were paid to the students, resulting in a small flow to UNLV. Now that these games have Nevada approval, Big Bet Gaming negotiated a resale of these games to Genesis Gaming, a global gaming equipment and distribution company. This agreement was completed in August. In addition to the six games named above, the technology transfer to this acquiring company includes one other project; Slide to Decide™. This sale includes both some upfront payments and future payments based upon performance. Thus far, revenue to UNLV has been approximately \$35,000; however, because of the potential future income streams from these products, should they be successful, and continuing technology transfer, total revenue over time is expected to be substantially greater.

Besides the technology transfer already discussed, several students have decided to pursue future development on their own, understanding that they still have a financial obligation to UNLV for any revenue derived from their projects. Specifically:

Troy Pettie and Evan Thomas have formed Guru Games to develop Line 'em Up™, as a new style skilled-based video game, as well as a number of other games that they have in the works. They are in the process of getting funding from a Business Accelerator and should create a revenue stream for UNLV.

John Lukasik has developed Scoring Frenzy, a new house-banked fantasy sports game which appears to have great future potential.

Jeffrey Hwang, a noted author and prize winning poker player, as well as a student of the program, has founded High Variance Games to develop his unique suite of high-volatility, crossover poker/casino games.

In addition to all of these students, one student has found employment in the gaming industry; John Nguyen have been employed by Station Casinos as a direct result of his game, Show Pai, which is currently offered at the Palace Station Casino.

*Big Bet Gaming LLC was established by CGI's Executive Director Dr. Mark Yoseloff as a means of getting student-invented table games to the casino floor quickly. As the former CEO of Shuffle Master, and as the developer of several successful gambling games himself, Dr. Yoseloff is an expert in table game invention and distribution. Breaking into the gaming industry is extremely difficult, and independent inventors often find commercialization to be a formidable challenge. In order to break through this barrier, Big Bet Gaming was established as a commercial outlet that would not otherwise have been available. As Dr. Yoseloff is the Founder, established companies readily view Big Bet Gaming projects as viable opportunities for revenue. Without the company, many of the games with potential would go unnoticed or flounder on the vine. Big Bet is committed to getting the table games it purchases from students approved and on casino floors in a short amount of time. This is evidenced by the fact that within 18 months, four games have been approved for use in Nevada casinos and two of those games have actually made it to casino floors.

All CGI participants are advised both during the class (by the university's intellectual property officers) and during any negotiation with Big Bet that they are not obliged to sell their game to Big Bet, and all CGI participants continue to be exposed to opportunities with other major game developers as well. Participants are encouraged to seek independent advice from UNLV's Office of Economic Development, Boyd Law School, and/or their own personal attorney or advisor. All transactions and processes are regularly monitored by the university's intellectual property officers. This type of arrangement is not abnormal in the area of university/private collaboration in the development of intellectual property. Thanks to this mechanism, CGI has an effective and efficient means to get students' games out onto casino floors - generating revenue much faster and in greater numbers than would otherwise be possible.

Appendix 2 – Scorecard Supporting Documentation

Electronic Acknowledgement Receipt	
EFS ID:	27699880
Application Number:	62430083
International Application Number:	
Confirmation Number:	6753
Title of Invention:	BEAT-THE-SPREAD SPECTRUM BET SPORTS WAGER
First Named Inventor/Applicant Name:	Gabriel Gomes
Customer Number:	87462
Filer:	Mark A. Litman
Filer Authorized By:	
Attorney Docket Number:	777_039USP1
Receipt Date:	05-DEC-2016
Filing Date:	
Time Stamp:	20:25:18
Application Type:	Provisional

Payment information:

Submitted with Payment	yes
Payment Type	CARD
Payment was successfully received in RAM	\$130
RAM confirmation Number	120616INTEFSW20264000
Deposit Account	
Authorized User	
The Director of the USPTO is hereby authorized to charge indicated fees and credit any overpayment as follows:	

Electronic Acknowledgement Receipt	
EFS ID:	27888828
Application Number:	62438442
International Application Number:	
Confirmation Number:	8618
Title of Invention:	RAPID LOW TOTAL-CARD BLACKJACK-TYPE GAME
First Named Inventor/Applicant Name:	Matthew Henry Stream
Customer Number:	97462
Filer:	Mark A. Litman
Filer Authorized By:	
Attorney Docket Number:	777_746USP1
Receipt Date:	22-DEC-2016
Filing Date:	
Time Stamp:	21:50:45
Application Type:	Provisional

Payment information:

Submitted with Payment	yes
Payment Type	CARD
Payment was successfully received in RAM	\$130
RAM confirmation Number	122316INTEFSW21560000
Deposit Account	
Authorized User	

The Director of the USPTO is hereby authorized to charge indicated fees and credit any overpayment as follows:



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
 United States Patent and Trademark Office
 Address: COMMISSIONER FOR PATENTS
 P.O. Box 1450
 Alexandria, Virginia 22313-1450
 www.uspto.gov

NOTICE OF ALLOWANCE AND FEE(S) DUE

97462 7590 01/03/2017
 Mark A. Litman & Associates, P.A.
 7001 Cahill Road, Ste. 15A
 Edina, MN 55439

EXAMINER

DEODHAR, OMKAR A

ART UNIT PAPER NUMBER

3714

DATE MAILED: 01/03/2017

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
14/586,960	12/31/2014	Robert Barragan	777.020US1	4257

TITLE OF INVENTION: WHEEL-SPINNING WAGERING METHOD AND APPARATUS FOR SEQUENTIAL OUTCOMES ON MULTIPLE WHEELS

APPLN. TYPE	ENTITY STATUS	ISSUE FEE DUE	PUBLICATION FEE DUE	PREV. PAID ISSUE FEE	TOTAL FEE(S) DUE	DATE DUE
nonprovisional	SMALL	\$480	\$0	\$0	\$480	04/03/2017

THE APPLICATION IDENTIFIED ABOVE HAS BEEN EXAMINED AND IS ALLOWED FOR ISSUANCE AS A PATENT. PROSECUTION ON THE MERITS IS CLOSED. THIS NOTICE OF ALLOWANCE IS NOT A GRANT OF PATENT RIGHTS. THIS APPLICATION IS SUBJECT TO WITHDRAWAL FROM ISSUE AT THE INITIATIVE OF THE OFFICE OR UPON PETITION BY THE APPLICANT. SEE 37 CFR 1.313 AND MPEP 1308.

THE ISSUE FEE AND PUBLICATION FEE (IF REQUIRED) MUST BE PAID WITHIN THREE MONTHS FROM THE MAILING DATE OF THIS NOTICE OR THIS APPLICATION SHALL BE REGARDED AS ABANDONED. THIS STATUTORY PERIOD CANNOT BE EXTENDED. SEE 35 U.S.C. 151. THE ISSUE FEE DUE INDICATED ABOVE DOES NOT REFLECT A CREDIT FOR ANY PREVIOUSLY PAID ISSUE FEE IN THIS APPLICATION. IF AN ISSUE FEE HAS PREVIOUSLY BEEN PAID IN THIS APPLICATION (AS SHOWN ABOVE), THE RETURN OF PART B OF THIS FORM WILL BE CONSIDERED A REQUEST TO REAPPLY THE PREVIOUSLY PAID ISSUE FEE TOWARD THE ISSUE FEE NOW DUE.

HOW TO REPLY TO THIS NOTICE:

I. Review the ENTITY STATUS shown above. If the ENTITY STATUS is shown as SMALL or MICRO, verify whether entitlement to that entity status still applies.

If the ENTITY STATUS is the same as shown above, pay the TOTAL FEE(S) DUE shown above.

If the ENTITY STATUS is changed from that shown above, on PART B - FEE(S) TRANSMITTAL, complete section number 5 titled "Change in Entity Status (from status indicated above)".

For purposes of this notice, small entity fees are 1/2 the amount of undiscounted fees, and micro entity fees are 1/2 the amount of small entity fees.

II. PART B - FEE(S) TRANSMITTAL, or its equivalent, must be completed and returned to the United States Patent and Trademark Office (USPTO) with your ISSUE FEE and PUBLICATION FEE (if required). If you are charging the fee(s) to your deposit account, section "4b" of Part B - Fee(s) Transmittal should be completed and an extra copy of the form should be submitted. If an equivalent of Part B is filed, a request to reapply a previously paid issue fee must be clearly made, and delays in processing may occur due to the difficulty in recognizing the paper as an equivalent of Part B.

III. All communications regarding this application must give the application number. Please direct all communications prior to issuance to Mail Stop ISSUE FEE unless advised to the contrary.

IMPORTANT REMINDER: Utility patents issuing on applications filed on or after Dec. 12, 1980 may require payment of maintenance fees. It is patentee's responsibility to ensure timely payment of maintenance fees when due.